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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte WENJIE DENG

Appeal 2009-001191
Application 10/047,742
Technology Center 3700

Decided: September 9, 2009

Before TONI R. SCHEINER, DONALD E. ADAMS, and
LORA M. GREEN, *Administrative Patent Judges*.

ADAMS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal under 35 U.S.C. § 134 involves claims 1-7, 9-12, 14-24, and 29-34. Of the remaining claims, the Examiner has indicated that claims 10-12 and 14-24 are allowable (Fin. Rej. 8) and objected to claims 2-4 (Ans. 2). We have jurisdiction under 35 U.S.C. § 6(b).

STATEMENT OF THE CASE

The claims are directed to a surgical handpiece for actuation of a cutting accessory attached to the handpiece. Claims 1, 5, and 29 are illustrative:

1. A surgical handpiece for actuation of a cutting accessory attached to said handpiece, said handpiece comprising:

a housing, said housing formed to define a suction bore that extends from the cutting accessory and a suction passage;

a power generating unit disposed in said housing for actuating the cutting accessory;

a valve assembly, said valve assembly including:

a valve chamber defined by said housing between the suction bore and the suction passage; and

a valve rotatably mounted in the valve chamber and including a movable control member disposed outside of said housing, said valve being formed to have a valve bore that extends therethrough with first and second non-circular valve bore openings at the opposite ends of said valve bore, wherein the first valve bore opening is selectively placed in registration with the suction bore and the second valve bore opening is placed in registration with the suction passage as the valve is rotated from a closed state to a fully open state, the first valve bore opening being shaped to have a first narrow width section that is first placed in registration with the suction bore during the rotation of the valve from the closed state to the fully open state and a second, wide width section that is placed in registration with the suction bore as said valve is further rotated toward the fully open state, the second valve bore opening being shaped to have a first narrow width section that is first

placed in registration with the suction passage during the rotation of the valve from the closed state to the fully open state and a second, wide width section that is placed in registration with the suction passage as the valve is further rotated toward the fully open state.

5. The surgical handpiece of Claim 1, further including an indexing assembly attached to said valve assembly and said housing for providing a resistance to the rotation of said valve when said valve is rotated to a position in which the first narrow width section of the first valve bore opening is placed in partial registration with the suction bore.

29. A surgical handpiece for actuation of a cutting accessory attached to said handpiece, said handpiece comprising:

- a housing defining a suction bore that extends from the cutting accessory;

- a power generating unit disposed in said housing for actuating the cutting accessory;

- a valve assembly including a valve member positioned to regulate fluid flow through the suction bore;

- a suction mount arrangement having a suction mount that is rigidly mounted to said housing and that is fitted to an opening into the suction bore, said suction mount having a proximal end that extends away from said housing; and

- a suction fitting that is rotatably mounted to the proximal end of said suction mount, said suction fitting having a groove extending about a circumference thereof, said groove coacting with said suction mount arrangement to enable rotation of said suction fitting with respect to said suction mount.

The Examiner relies on the following evidence:

Wyzenbeck	US 2,525,329	Oct. 10, 1950
Cox	US 4,113,288	Sep. 12, 1978
Cook	US 5,241,990	Sep. 7, 1993
Sjostrom et al.	US 5,871,493	Feb. 16, 1999
Deng ('441)	US 6,312,441 B1	Nov. 6, 2001
Deng et al. ('067)	US 6,436,067 B1	Aug. 20, 2002

The rejections presented by the Examiner are as follows:

1. Claims 1 and 9 stand rejected under 35 U.S.C § 103(a) as unpatentable over the combination of Sjostrom and Cook.
2. Claim 5 stands rejected under 35 U.S.C § 103(a) as unpatentable over the combination of Sjostrom, Cook, and '067.
3. Claims 1 and 5 stand rejected under 35 U.S.C § 103(a) as unpatentable over the combination of '067 and Cook.
4. Claims 29, 30, and 33 stand rejected under 35 U.S.C § 103(a) as unpatentable over the combination of Sjostrom, Wyzenbeck, and Cox.
5. Claims 1 and 7 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-10 of '441 in view of Cook.
6. Claims 5 and 6 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-10 of '441 in view of Cook and Deng.

We affirm.

Obviousness:

PRINCIPLES OF LAW

In proceedings before the Patent and Trademark Office, the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art. *In re Fritch*, 972 F.2d 1260, 1265 (Fed. Cir. 1992). On appeal to this Board, Appellant must show that the Examiner has not sustained the required burden. *See Ex parte Yamaguchi*, 88 USPQ2d 1606, 1608 and 1614 (BPAI 2008) (precedential); *Ex parte Fu*, 89 USPQ2d 1115, 1118 and 1123 (BPAI 2008) (precedential).

“The combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007). It is proper to “take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *Id.* at 418. *See also id.* at 421 (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”). 35 U.S.C. § 103(a) “forbids issuance of a patent when ‘the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.’” *KSR*, 550 U.S. at 405 (quoting 35 U.S.C. § 103(a)).

It is well settled that argument by counsel cannot take the place of evidence. *In re Cole*, 326 F.2d 769, 773 (CCPA 1964); *In re Geisler*, 116 F.3d 1465, 1471 (Fed. Cir. 1997).

Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) (“Any arguments or authorities not included in the brief or a reply brief . . . will be refused consideration by the Board, unless good cause is shown.”).

The combination of Sjostrom and Cook:

Claim 1:

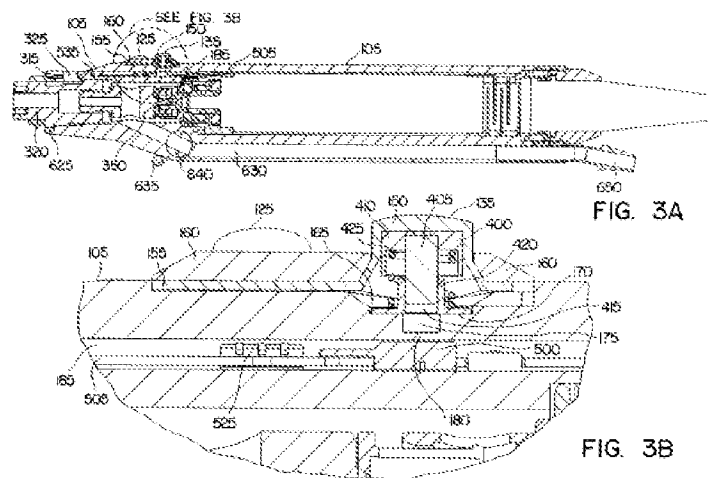
ISSUE

Has Appellant established error in the Examiner's conclusion that it would have been prima facie obvious to modify Sjostrom's apparatus with Cook's tear-drop shaped valve bore openings?

FINDINGS OF FACT

FF 1. There is no dispute that Sjostrom teaches a surgical handpiece that includes an aspiration channel 630 controlled by a rotatable valve 640 (App. Br. 7).

FF 2. For clarity, we reproduce Sjostrom's figures 3A and 3B below:



“FIG. 3A is a side cross sectional view of a surgical handpiece. FIG. 3B is an enlarged portion of the cross sectional view of FIG. 3A” (Sjostrom, col. 4, ll. 42-45).

FF 3. The Examiner finds that Sjostrom fails to teach non-circular valve stem bore openings (Ans. 4).

FF 4. There is no dispute that Cook teaches an apparatus with tear-drop shaped valve bore openings (Ans. 4; App. Br. 7).

FF 5. The Examiner finds that “tear-drop shaped valve bore openings . . . allow[] for further regulation of the degree of suction flow” (Ans. 4).

FF 6. For clarity, we reproduce Cook’s figure 2 below:

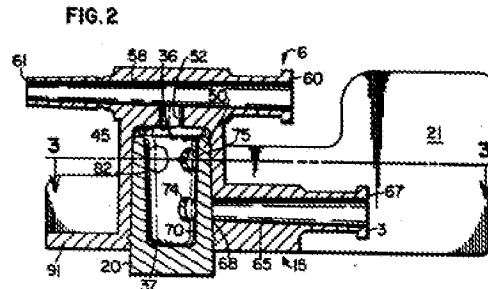


FIG. 2 is a top cross-sectional view of Cook’s valve device showing teardrop-shaped aperture (75) (Cook, col. 3, ll. 52-55; col. 5, ll. 49-50).

ANALYSIS

Claim 1 requires a valve bore that has non-circular valve bore openings at opposite ends to extend through the valve. Appellant contends that since Cook’s tear-drop shaped apertures (74 and 75) open into a large hollow inner flow chamber (70) of the valve body, Cook’s tear-drop shaped apertures are not at opposite ends of a valve bore that extends through a valve (App. Br. 9).

From this Appellant contends that:

[I]f one of ordinary skill in the art were able to substitute the valve body having a tear-drop shaped aperture of Cook for the channel in the valve 640 of Sjostrom, which Appellant disagrees with, the resulting channel would have a tear-drop shape at one end for a small distance and then a large opening or chamber extending through the rest of the valve body to open at the other end of the passage.

(App. Br. 10.) We are not persuaded.

Contrary to Appellant's contention, claim 1 does not require that the bore be "non-circular". To the contrary, claim 1 requires the openings at opposite ends of the bore to be non-circular (*see* Ans. 9). Accordingly, we are not persuaded by Appellant's contention that the combination of references fail to suggest "a tear-drop shape along the entire length of the bore" (App. Br. 9; *see e.g.*, App. Br. 10 ("a tear-drop shape at one end for a small distance")). Since such a structure is not required by claim 1, the failure of the combined references to teach such a structure is irrelevant.

Further, a "person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR*, 550 U.S. at 421. It is proper to "take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *Id.* at 418. The Examiner has found, and Appellant does not dispute, that Cook's "tear-drop shaped valve bore openings . . . allow[] for further regulation of the degree of suction flow" (FF 5). There is no evidence on this record to suggest that tear-drop shaped valve bore openings would not provide for the regulation of the degree of suction flow in the absence of a Cook's flow chamber 70. Absent evidence to the contrary we find that it is reasonable to expect that Cook's tear-drop shaped valve bore openings would retain their ability to regulate the degree of suction flow when incorporated into Sjostrom's valve assembly (*see* Ans. 9 ("Placing tear-drop shaped openings at both ends of the valve bore of Sjostrom would allow for a more precise control of aspiration, as taught by Cook. . . . The Examiner is stating that it would have been obvious to merely change the shape of the openings and/or valve of Sjostrom to be tear-drop shaped))). We find no error in the Examiner's conclusion.

CONCLUSION OF LAW

Appellant failed to establish error in the Examiner's conclusion that it would have been prima facie obvious to modify Sjostrom's apparatus with Cook's tear-drop shaped valve bore openings.

Claim 9:

ISSUE

Has Appellant established error in the Examiner's conclusion that it would have been prima facie obvious to modify Sjostrom's apparatus with Cook's tear-drop shaped valve bore openings that are inverted relative to one another?

FINDINGS OF FACT

FF 7. Claim 9 depends from claim 1 and further requires the first and second valve bore openings to be identically shaped but inverted relative to one another on opposite sides of the valve (*see* Claim 9; App. Br. 10).

FF 8. For clarity we reproduce Appellant's Figure 6 below:

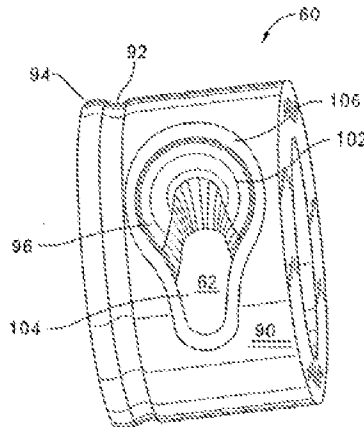


FIG. 6

“Figure 6 is a perspective view of the valve barrel” (Spec. 5: ¶ 0021).

FF 9. The Examiner finds that by inverting the tear-drop shaped valve bore openings relative to one another on either side of the valve the same sized valve bore opening would be aligned with the bore openings of the suction tube bore on either side of the valve (Ans. 10).

ANALYSIS

Appellant contends that “the large size of the inner flow chamber in the valve body of Cook relative to the aperture appears to result in no negative consequence for the operation of the device” (App. Br. 11). Appellant contends that “the most restricted tear-drop shaped first bore opening having the smallest path would primarily restrict flow regardless of a greater size for the second bore opening at the other end of the bore” (*id.*). We are not persuaded.

As the Examiner explains, the inversion of the tear-drop bore opening on either side of a valve would allow the size of the bore opening on one side of a valve to match the bore opening on the other side of the same valve (*see* Ans. 9). We find no error in the Examiner’s reasoning.

CONCLUSION OF LAW

Appellant failed to establish error in the Examiner’s conclusion that it would have been *prima facie* obvious to modify Sjostrom’s apparatus with Cook’s tear-drop shaped valve bore openings.

SUMMARY

Appellant failed to establish error in the Examiner's prima facie case of obviousness. The rejection of claims 1 and 9 under 35 U.S.C § 103(a) as unpatentable over the combination of Sjostrom and Cook is affirmed.

The combination of Sjostrom, Cook, and '067:

ISSUE

Has Appellant established error in the Examiner's prima facie case of obviousness?

FINDINGS OF FACT

FF 10. The Examiner relies on the combination of Sjostrom and Cook as discussed above (Ans. 5).

FF 11. The Examiner finds that the combination of Sjostrom and Cook fails to teach an indexing assembly (*id.*).

FF 12. The Examiner finds that '067 teaches "an indexing assembly on a valve" (*id.*).

FF 13. Appellant did not respond to this ground of rejection.

ANALYSIS

Appellant did not respond to this ground of rejection (FF 13).

CONCLUSION OF LAW

Appellant failed to establish error in the Examiner's prima facie case of obviousness. The rejection of claim 5 under 35 U.S.C § 103(a) as

unpatentable over the combination of Sjostrom, Cook, and Deng is summarily affirmed.

The combination of '067 and Cook:

ISSUE

Has Appellant established error in the Examiner's prima facie case of obviousness?

FINDING OF FACT

FF 14. There is no dispute that '067 teaches a surgical handpiece comprising a suction valve (App. Br. 12 and 13).

ANALYSIS

Appellant asserts that “[f]or the reasons set forth above with respect to the rejection of Claim 1 based on the combination of Sjostrom and Cook, Appellant’s [sic] believe the features of Cook cannot properly be combined with the ‘067 patent” (App. Br. 13). We are not persuaded for the reasons set forth with regard to claim 1 based on the combination of Sjostrom and Cook. Appellant contends that since claim 5 depends from claim 1 it is also “distinguishable over the ‘067 patent in view of Cook” (*id.*). We are not persuaded for the same reasons.

CONCLUSION OF LAW

Appellant failed to establish error in the Examiner's prima facie case of obviousness. The rejection of claims 1 and 5 under 35 U.S.C § 103(a) as unpatentable over the combination of '067 and Cook is affirmed.

The combination of Sjostrom, Wyzenbeck, and Cox:

Claim 29:

ISSUE

Has Appellant established error in the Examiner's prima facie case of obviousness?

FINDING OF FACT

FF 15. There is no dispute that Sjostrom teaches a surgical handpiece that includes an aspiration channel 630 controlled by a rotatable valve 640 (FF 1; App. Br. 16).

FF 16. There is no dispute that Sjostrom's apparatus comprises an adaptor (e.g., spigot 650) that allows the handpiece to be connected to a suction source (App. Br. 16; Sjostrom, col. 12, ll. 30-31).

FF 17. There is no dispute that Sjostrom fails to teach a rotatable coupling on the suction tube (Ans. 6; App. Br. 16).

FF 18. There is no dispute that "Wyzenbeck discloses a rotatable coupling on a suction fitting for a suction tube" (Ans. 6; *see also* App. Br. 16-17).

FF 19. The Examiner finds that Wyzenbeck teaches "that it was known that rotatable couplings on suction handpieces/suction hoses was known and that such would tend to limit torque forces applied to the handpiece to be applied or delivered to the suction tube" (Ans. 11).

FF 20. There is no dispute that Cox teaches a rotatable or swivel coupling comprising a locking element (App. Br. 17; Ans. 6).

ANALYSIS

Appellant contends that “[t]here is no motivation to substitute the removable locking ring of Wzyenbeek for the spigot of Sjostrom” (App. Br. 17). We disagree. As the Examiner explains, “[i]t would have been obvious to have provided a rotatable coupling on Sjostrom’s device, as this allows for the handpiece to rotate relative to the suction tube thus counteracting torsional forces applied while moving an[d] operating the handpiece” (Ans. 6). Appellant has failed to establish error in the Examiner’s conclusion.

Appellant contends that “[m]odifying key elements of the secondary reference to Wyzenbeek to include features from Cox would not have been obvious to one of ordinary skill in the art. . . . [absent] improper hindsight” (App. Br. 18). We disagree. As the Examiner explains “[i]t would have been obvious to have used the connection of Cox for the suction fitting of Sjostrom as it provides a conduit with a constant flow diameter while providing a rotatable coupling allowing rotation of one tube to not be translated to the other tube” (Ans. 6-7). Appellant has failed to establish error in the Examiner’s conclusion.

CONCLUSION OF LAW

Appellant failed to establish error in the Examiner’s prima facie case of obviousness.

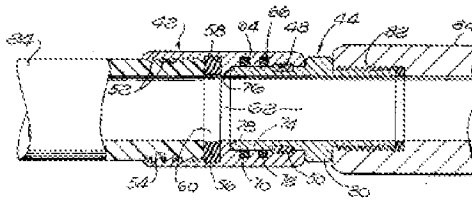
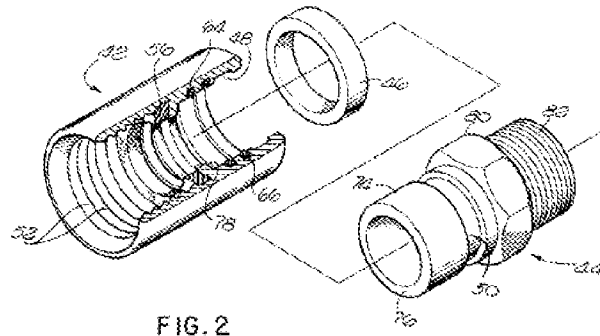
Claims 30 and 33:

ISSUE

Has Appellant established error in the Examiner’s prima facie case of obviousness?

FINDING OF FACT

FF 21. For clarity Cox's figures 2 and 3 are reproduced below:



“FIG. 2 is a partly exploded perspective view of components of the couplings provided in . . . [Cox's] system. . . ; FIG. 3 is a vertical sectional view taken through an assembled coupling in accordance with . . . [Cox's] invention” (Cox, col. 2, ll. 17-22).

FF 22. Cox teaches that

Upon the completion of each of the individual members, the O-rings 70 and 72 are placed in the grooves 64 and 66 and the washer 56 is seated against the shoulder 58. The nylon-like ring 46 is forced over the cylindrical section 74 of the component 44 to be seated in the groove 50. Next, as the final step in assembly, the component 44 is pressed into the component 42 to accomplish alignment of the grooves 48 and 50 with the nylon-like ring 46 therebetween. In such an assembled state, the coupling as depicted in FIG. 3 accommodates swivel motion between the components 42 and 44 yet offers no obstructions to flow therethrough.

(Cox, col. 4, ll. 14-25.)

FF 23. Cox teaches that “once mated (FIG. 3) the components 42 and 44 are effectively locked together” (Cox, col. 3, ll. 28-30).

ANALYSIS

Claims 30 and 33 have not been argued separately and therefore stand or fall together. 37 C.F.R. § 41.37(c)(1)(vii). Claim 30 is representative.

Appellant contends that mating Cox’s components 42 and 44 with O-ring 46 “effectively permanently locks the components together” (App. Br. 18). However, “[n]othing in Cox states that the connection is permanent, as indicated by the [A]ppellant” (Ans. 11). While Cox teaches that “once mated . . . components 42 and 44 are effectively locked together” there is no teaching in Cox that the components are *permanently* locked together. Appellant has failed to provide an evidentiary basis to support a finding that Cox’s components are *permanently* locked together.

CONCLUSION OF LAW

Appellant failed to establish error in the Examiner’s prima facie case of obviousness.

SUMMARY

Appellant failed to establish error in the Examiner’s prima facie case of obviousness. The rejection of claims 29 and 30 under 35 U.S.C § 103(a) as unpatentable over the combination of Sjostrom, Wyzenbeek, and Cox is affirmed. Claim 33 falls together with claim 30.

Obviousness-type double patenting:

PRINCIPLES OF LAW

The analyses for obviousness under 35 U.S.C. § 103 and obviousness-type double patenting are not identical; for one thing, “[t]he objects of comparison are very different: Obviousness compares claimed subject matter to the prior art; nonstatutory double patenting compares claims in an earlier patent to claims in a later patent or application.” *Geneva Pharms., Inc. v. GlaxoSmithKline PLC*, 349 F.3d 1373, 1378 n.1 (Fed. Cir. 2003).

The purpose of an obviousness-type double patenting rejection is “to prevent an unjustified extension of the term of the right to exclude granted by a patent by allowing a second patent claiming an obvious variant of the same invention to issue to the same owner later.” *In re Berg*, 140 F.3d 1428, 1431-1432 Fed. Cir. 1998).

It is proper to “take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR Int’l Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1741 (2007). *See also id.* at 1742 (“A person of ordinary skill is also a person of ordinary creativity, not an automaton.”). The “suggestion test is in actuality quite flexible and not only permits, but *requires*, consideration of common knowledge and common sense.” *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1367 (Fed. Cir. 2006).

It is well settled that argument by counsel cannot take the place of evidence. *In re Cole*, 326 F.2d 769, 773 (CCPA 1964); *In re Geisler*, 116 F.3d 1465, 1471 (Fed. Cir. 1997).

Arguments not made are waived. *See* 37 C.F.R. § 41.37(c)(1)(vii) (“Any arguments or authorities not included in the brief or a reply brief . . . will be refused consideration by the Board, unless good cause is shown.”).

The combination of ‘441 and Cook:

Claim 1:

ISSUE

Has Appellant established error in the Examiner’s prima facie case of obviousness?

FINDING OF FACT

FF 24. There is no dispute that ‘441 teaches a surgical handpiece comprising a valve body (App. Br. 13).

ANALYSIS

Appellant contends that

As discussed above . . . [i]f one were to substitute the tear-shaped bore of Cook with the bore claimed in the ‘441 patent, while ignoring that the tear-shaped bore does not extend through the valve body in Cook . . . the modified bore would have the narrow width section extending therethrough such that during opening one end of the bore would open at the narrow width section and the other end of the bore would open at the wide width section.

(App. Br. 14.) Stated differently, Appellant contends that the combination of ‘441 and Cook fails to teach valve bore openings that are “inverted” relative to one another. We are not persuaded. Instead, as discussed above, we find no error in the Examiner’s conclusion that the inversion of the tear-drop bore opening on either side of a valve would allow the size of the bore

opening on one side of a valve to match the bore opening on the other side of the same valve (*see* Ans. 9).

CONCLUSION OF LAW

Appellant failed to establish error in the Examiner's prima facie case of obviousness.

Claim 7:

ISSUE

Has Appellant established error in the Examiner's prima facie case of obviousness?

ANALYSIS

Appellant contends that '441 "does not claim any non-circular valve bore opening, much less disclose a tear-shaped valve bore opening" (App. Br. 15). Appellant contends that:

[I]f one of ordinary skill in the art were to substitute the valve body of Cook, for the valve in the claims of the '441 patent, the result would be a valve bore opening of short length opening into a large chamber within a bore body and followed by a second larger opening, rather than a valve bore opening as recited in Appellant's Claim 7.

(*Id.*) We are not persuaded.

It is proper to "take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *Id.* at 418. The Examiner has found that Cook's "tear-drop shaped valve bore openings . . . allow[] for further regulation of the degree of suction flow" (FF 5). Absent evidence to

the contrary we find that it is reasonable to expect that Cook's tear-drop shaped valve bore openings would retain their ability to regulate the degree of suction flow when incorporated into '441's valve assembly. Therefore, we find no error in the Examiner's conclusion.

CONCLUSION OF LAW

Appellant failed to establish error in the Examiner's prima facie case of obviousness.

SUMMARY

Appellant failed to establish error in the Examiner's prima facie case of obviousness. The rejection of claims 1 and 7 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-10 of '441 in view of Cook.

The combination of '441, Cook, and '067:

ISSUE

Has Appellant established error in the Examiner's prima facie case of obviousness?

FINDINGS OF FACT

FF 25. Appellant did not respond to this ground of rejection.

ANALYSIS

Appellant did not respond to this ground of rejection (FF 25).

CONCLUSION OF LAW

Appellant failed to establish error in the Examiner's prima facie case of obviousness. The rejection of claims 5 and 6 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-10 of '441 in view of Cook and Deng is affirmed.

TIME PERIOD FOR RESPONSE

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a).

AFFIRMED

Ssc:

FLYNN, THIEL, BOUTELL & TANIS, P.C.

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